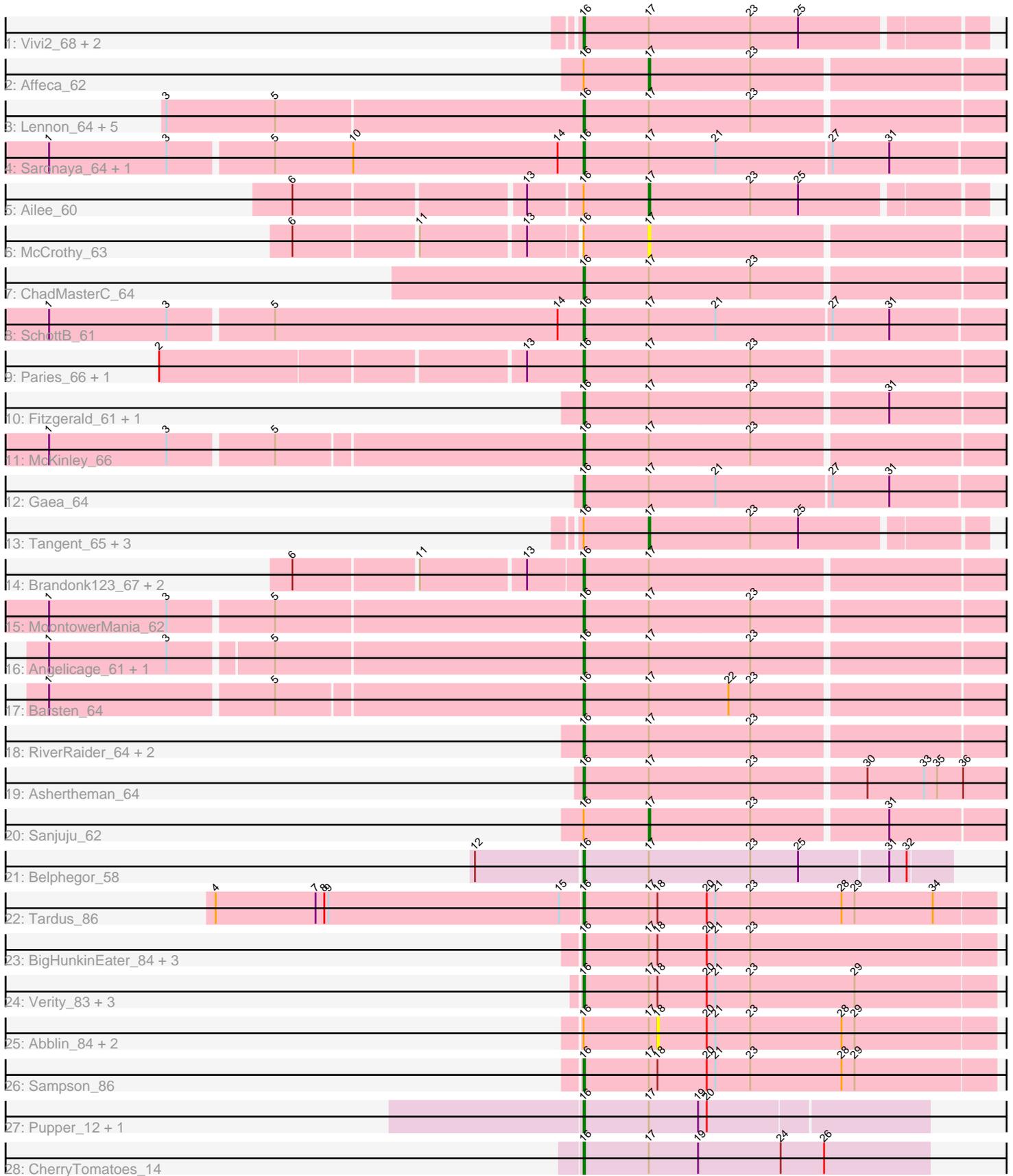# Pham 291216

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 291216 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291216 has 55 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Vivi2_68, Charming_66, BobBob_63
• Track 2 : Affeca_62
• Track 3 : Lennon_64, Geodirt_63, Sitar_64, Keitabear_63, Stultus_60, Kewpiedoll_63
• Track 4 : Saronaya_64, Gustavo_64
• Track 5 : Ailee_60
• Track 6 : McCrothy_63
• Track 7 : ChadMasterC_64
• Track 8 : SchottB_61
• Track 9 : Paries_66, Galadriel_63
• Track 10 : Fitzgerald_61, Jabberwocky_61
• Track 11 : McKinley_66
• Track 12 : Gaea_64
• Track 13 : Tangent_65, Rofo_63, Fosterous_66, Nordenberg_61
• Track 14 : Brandonk123_67, Kamashten_62, Thing3_62
• Track 15 : MoontowerMania_62
• Track 16 : Angelicage_61, Shivanishola_61
• Track 17 : Barsten_64
• Track 18 : RiverRaider_64, Sedona_63, Love_67
• Track 19 : Ashertheman_64
• Track 20 : Sanjuju_62
• Track 21 : Belphegor_58
• Track 22 : Tardus_86
• Track 23 : BigHunkinEater_84, APunk_84, Pumpkiney_84, Zitch_86
• Track 24 : Verity_83, Delrey21_84, DoctorFroggo_84, Zipp_84
• Track 25 : Abblin_84, Natkenzie_84, Scioto_84
• Track 26 : Sampson_86
• Track 27 : Pupper_12, SCentae_12
• Track 28 : CherryTomatoes_14

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 16, it was called in 42 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• APunk_84, Angelicage_61, Ashertheman_64, Barsten_64, Belphegor_58, BigHunkinEater_84, BobBob_63, Brandonk123_67, ChadMasterC_64, Charming_66, CherryTomatoes_14, Delrey21_84, DoctorFroggo_84, Fitzgerald_61, Gaea_64, Galadriel_63, Geodirt_63, Gustavo_64, Jabberwocky_61, Kamashten_62, Keitabear_63, Kewpiedoll_63, Lennon_64, Love_67, McKinley_66, MoontowerMania_62, Paries_66, Pumpkiney_84, Pupper_12, RiverRaider_64, SCentae_12, Sampson_86, Saronaya_64, SchottB_61, Sedona_63, Shivanishola_61, Sitar_64, Stultus_60, Tardus_86, Thing3_62, Verity_83, Vivi2_68, Zipp_84, Zitch_86,

Genes that have the "Most Annotated" start but do not call it:
• Abblin_84, Affeca_62, Ailee_60, Fosterous_66, McCrothy_63, Natkenzie_84, Nordenberg_61, Rofo_63, Sanjuju_62, Scioto_84, Tangent_65,

Genes that do not have the "Most Annotated" start:
•

Summary by start number:

Start 16:
• Found in 55 of 55 (100.0%) of genes in pham
• Manual Annotations of this start: 42 of 49
• Called 80.0% of time when present
• Phage (with cluster) where this start called: APunk_84 (DE4), Angelicage_61 (DE1), Ashertheman_64 (DE1), Barsten_64 (DE1), Belphegor_58 (DE2), BigHunkinEater_84 (DE4), BobBob_63 (DE1), Brandonk123_67 (DE1), ChadMasterC_64 (DE1), Charming_66 (DE1), CherryTomatoes_14 (DO), Delrey21_84 (DE4), DoctorFroggo_84 (DE4), Fitzgerald_61 (DE1), Gaea_64 (DE1), Galadriel_63 (DE1), Geodirt_63 (DE1), Gustavo_64 (DE1), Jabberwocky_61 (DE1), Kamashten_62 (DE1), Keitabear_63 (DE1), Kewpiedoll_63 (DE1), Lennon_64 (DE1), Love_67 (DE1), McKinley_66 (DE1), MoontowerMania_62 (DE1), Paries_66 (DE1), Pumpkiney_84 (DE4), Pupper_12 (DO), RiverRaider_64 (DE1), SCentae_12 (DO), Sampson_86 (DE4), Saronaya_64 (DE1), SchottB_61 (DE1), Sedona_63 (DE1), Shivanishola_61 (DE1), Sitar_64 (DE1), Stultus_60 (DE1), Tardus_86 (DE4), Thing3_62 (DE1), Verity_83 (DE4), Vivi2_68 (DE1), Zipp_84 (DE4), Zitch_86 (DE4),

Start 17:
• Found in 55 of 55 (100.0%) of genes in pham
• Manual Annotations of this start: 7 of 49
• Called 14.5% of time when present
• Phage (with cluster) where this start called: Affeca_62 (DE1), Ailee_60 (DE1), Fosterous_66 (DE1), McCrothy_63 (DE1), Nordenberg_61 (DE1), Rofo_63 (DE1), Sanjuju_62 (DE1), Tangent_65 (DE1),

Start 18:
• Found in 13 of 55 (23.6%) of genes in pham
• No Manual Annotations of this start.
• Called 23.1% of time when present
• Phage (with cluster) where this start called: Abblin_84 (DE4), Natkenzie_84 (DE4), Scioto_84 (DE4),

Summary by clusters:

There are 4 clusters represented in this pham: DE1, DE2, DE4, DO,

Info for manual annotations of cluster DE1:
•Start number 16 was manually annotated 30 times for cluster DE1.
•Start number 17 was manually annotated 7 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 16 was manually annotated 1 time for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 16 was manually annotated 8 times for cluster DE4.

Info for manual annotations of cluster DO:
•Start number 16 was manually annotated 3 times for cluster DO.

Gene Information:
Gene: APunk_84 Start: 57342, Stop: 57623, Start Num: 16
Candidate Starts for APunk_84:
(Start: 16 @57342 has 42 MA's), (Start: 17 @57387 has 7 MA's), (18, 57393), (20, 57426), (21, 57432), (23, 57456),

Gene: Abblin_84 Start: 57551, Stop: 57781, Start Num: 18
Candidate Starts for Abblin_84:
(Start: 16 @57500 has 42 MA's), (Start: 17 @57545 has 7 MA's), (18, 57551), (20, 57584), (21, 57590), (23, 57614), (28, 57677), (29, 57686),

Gene: Affeca_62 Start: 50082, Stop: 50321, Start Num: 17
Candidate Starts for Affeca_62:
(Start: 16 @50037 has 42 MA's), (Start: 17 @50082 has 7 MA's), (23, 50151),

Gene: Ailee_60 Start: 49680, Stop: 49901, Start Num: 17
Candidate Starts for Ailee_60:
(6, 49449), (13, 49599), (Start: 16 @49635 has 42 MA's), (Start: 17 @49680 has 7 MA's), (23, 49749), (25, 49782),

Gene: Angelicage_61 Start: 49989, Stop: 50273, Start Num: 16
Candidate Starts for Angelicage_61:
(1, 49632), (3, 49713), (5, 49779), (Start: 16 @49989 has 42 MA's), (Start: 17 @50034 has 7 MA's), (23, 50103),

Gene: Ashertheman_64 Start: 49167, Stop: 49451, Start Num: 16
Candidate Starts for Ashertheman_64:
(Start: 16 @49167 has 42 MA's), (Start: 17 @49212 has 7 MA's), (23, 49281), (30, 49356), (33, 49395), (35, 49404), (36, 49422),

Gene: Barsten_64 Start: 50125, Stop: 50409, Start Num: 16
Candidate Starts for Barsten_64:

(1, 49768), (5, 49918), (Start: 16 @50125 has 42 MA's), (Start: 17 @50170 has 7 MA's), (22, 50224), (23, 50239),

Gene: Belphegor_58 Start: 47990, Stop: 48238, Start Num: 16
Candidate Starts for Belphegor_58:
(12, 47918), (Start: 16 @47990 has 42 MA's), (Start: 17 @48035 has 7 MA's), (23, 48104), (25, 48137), (31, 48197), (32, 48209),

Gene: BigHunkinEater_84 Start: 56970, Stop: 57251, Start Num: 16
Candidate Starts for BigHunkinEater_84:
(Start: 16 @56970 has 42 MA's), (Start: 17 @57015 has 7 MA's), (18, 57021), (20, 57054), (21, 57060), (23, 57084),

Gene: BobBob_63 Start: 49536, Stop: 49802, Start Num: 16
Candidate Starts for BobBob_63:
(Start: 16 @49536 has 42 MA's), (Start: 17 @49581 has 7 MA's), (23, 49650), (25, 49683),

Gene: Brandonk123_67 Start: 49918, Stop: 50202, Start Num: 16
Candidate Starts for Brandonk123_67:
(6, 49735), (11, 49816), (13, 49885), (Start: 16 @49918 has 42 MA's), (Start: 17 @49963 has 7 MA's),

Gene: ChadMasterC_64 Start: 51638, Stop: 51922, Start Num: 16
Candidate Starts for ChadMasterC_64:
(Start: 16 @51638 has 42 MA's), (Start: 17 @51683 has 7 MA's), (23, 51752),

Gene: Charming_66 Start: 49480, Stop: 49746, Start Num: 16
Candidate Starts for Charming_66:
(Start: 16 @49480 has 42 MA's), (Start: 17 @49525 has 7 MA's), (23, 49594), (25, 49627),

Gene: CherryTomatoes_14 Start: 4328, Stop: 4564, Start Num: 16
Candidate Starts for CherryTomatoes_14:
(Start: 16 @4328 has 42 MA's), (Start: 17 @4373 has 7 MA's), (19, 4406), (24, 4463), (26, 4493),

Gene: Delrey21_84 Start: 58911, Stop: 59192, Start Num: 16
Candidate Starts for Delrey21_84:
(Start: 16 @58911 has 42 MA's), (Start: 17 @58956 has 7 MA's), (18, 58962), (20, 58995), (21, 59001), (23, 59025), (29, 59097),

Gene: DoctorFroggo_84 Start: 58911, Stop: 59192, Start Num: 16
Candidate Starts for DoctorFroggo_84:
(Start: 16 @58911 has 42 MA's), (Start: 17 @58956 has 7 MA's), (18, 58962), (20, 58995), (21, 59001), (23, 59025), (29, 59097),

Gene: Fitzgerald_61 Start: 50359, Stop: 50643, Start Num: 16
Candidate Starts for Fitzgerald_61:
(Start: 16 @50359 has 42 MA's), (Start: 17 @50404 has 7 MA's), (23, 50473), (31, 50563),

Gene: Fosterous_66 Start: 50519, Stop: 50740, Start Num: 17
Candidate Starts for Fosterous_66:
(Start: 16 @50474 has 42 MA's), (Start: 17 @50519 has 7 MA's), (23, 50588), (25, 50621),

Gene: Gaea_64 Start: 48940, Stop: 49224, Start Num: 16
Candidate Starts for Gaea_64:

(Start: 16 @48940 has 42 MA's), (Start: 17 @48985 has 7 MA's), (21, 49030), (27, 49108), (31, 49147),

Gene: Galadriel_63 Start: 50552, Stop: 50836, Start Num: 16
Candidate Starts for Galadriel_63:
(2, 50273), (13, 50513), (Start: 16 @50552 has 42 MA's), (Start: 17 @50597 has 7 MA's), (23, 50666),

Gene: Geodirt_63 Start: 50703, Stop: 50987, Start Num: 16
Candidate Starts for Geodirt_63:
(3, 50418), (5, 50493), (Start: 16 @50703 has 42 MA's), (Start: 17 @50748 has 7 MA's), (23, 50817),

Gene: Gustavo_64 Start: 49613, Stop: 49897, Start Num: 16
Candidate Starts for Gustavo_64:
(1, 49250), (3, 49331), (5, 49400), (10, 49454), (14, 49595), (Start: 16 @49613 has 42 MA's), (Start: 17 @49658 has 7 MA's), (21, 49703), (27, 49781), (31, 49820),

Gene: Jabberwocky_61 Start: 50593, Stop: 50877, Start Num: 16
Candidate Starts for Jabberwocky_61:
(Start: 16 @50593 has 42 MA's), (Start: 17 @50638 has 7 MA's), (23, 50707), (31, 50797),

Gene: Kamashten_62 Start: 49351, Stop: 49635, Start Num: 16
Candidate Starts for Kamashten_62:
(6, 49168), (11, 49249), (13, 49318), (Start: 16 @49351 has 42 MA's), (Start: 17 @49396 has 7 MA's),

Gene: Keitabear_63 Start: 51257, Stop: 51541, Start Num: 16
Candidate Starts for Keitabear_63:
(3, 50972), (5, 51047), (Start: 16 @51257 has 42 MA's), (Start: 17 @51302 has 7 MA's), (23, 51371),

Gene: Kewpiedoll_63 Start: 50615, Stop: 50899, Start Num: 16
Candidate Starts for Kewpiedoll_63:
(3, 50330), (5, 50405), (Start: 16 @50615 has 42 MA's), (Start: 17 @50660 has 7 MA's), (23, 50729),

Gene: Lennon_64 Start: 51406, Stop: 51690, Start Num: 16
Candidate Starts for Lennon_64:
(3, 51121), (5, 51196), (Start: 16 @51406 has 42 MA's), (Start: 17 @51451 has 7 MA's), (23, 51520),

Gene: Love_67 Start: 50477, Stop: 50761, Start Num: 16
Candidate Starts for Love_67:
(Start: 16 @50477 has 42 MA's), (Start: 17 @50522 has 7 MA's), (23, 50591),

Gene: McCrothy_63 Start: 51182, Stop: 51421, Start Num: 17
Candidate Starts for McCrothy_63:
(6, 50954), (11, 51035), (13, 51104), (Start: 16 @51137 has 42 MA's), (Start: 17 @51182 has 7 MA's),

Gene: McKinley_66 Start: 50477, Stop: 50761, Start Num: 16
Candidate Starts for McKinley_66:
(1, 50120), (3, 50201), (5, 50270), (Start: 16 @50477 has 42 MA's), (Start: 17 @50522 has 7 MA's), (23, 50591),

Gene: MoontowerMania_62 Start: 50638, Stop: 50922, Start Num: 16
Candidate Starts for MoontowerMania_62:
(1, 50278), (3, 50359), (5, 50428), (Start: 16 @50638 has 42 MA's), (Start: 17 @50683 has 7 MA's), (23, 50752),

Gene: Natkenzie_84 Start: 57551, Stop: 57781, Start Num: 18
Candidate Starts for Natkenzie_84:
(Start: 16 @57500 has 42 MA's), (Start: 17 @57545 has 7 MA's), (18, 57551), (20, 57584), (21, 57590), (23, 57614), (28, 57677), (29, 57686),

Gene: Nordenberg_61 Start: 49089, Stop: 49310, Start Num: 17
Candidate Starts for Nordenberg_61:
(Start: 16 @49044 has 42 MA's), (Start: 17 @49089 has 7 MA's), (23, 49158), (25, 49191),

Gene: Paries_66 Start: 50738, Stop: 51022, Start Num: 16
Candidate Starts for Paries_66:
(2, 50459), (13, 50699), (Start: 16 @50738 has 42 MA's), (Start: 17 @50783 has 7 MA's), (23, 50852),

Gene: Pumpkiney_84 Start: 56098, Stop: 56370, Start Num: 16
Candidate Starts for Pumpkiney_84:
(Start: 16 @56098 has 42 MA's), (Start: 17 @56143 has 7 MA's), (18, 56149), (20, 56182), (21, 56188), (23, 56212),

Gene: Pupper_12 Start: 4107, Stop: 4337, Start Num: 16
Candidate Starts for Pupper_12:
(Start: 16 @4107 has 42 MA's), (Start: 17 @4152 has 7 MA's), (19, 4185), (20, 4191),

Gene: RiverRaider_64 Start: 48088, Stop: 48372, Start Num: 16
Candidate Starts for RiverRaider_64:
(Start: 16 @48088 has 42 MA's), (Start: 17 @48133 has 7 MA's), (23, 48202),

Gene: Rofo_63 Start: 50101, Stop: 50322, Start Num: 17
Candidate Starts for Rofo_63:
(Start: 16 @50056 has 42 MA's), (Start: 17 @50101 has 7 MA's), (23, 50170), (25, 50203),

Gene: SCentae_12 Start: 4106, Stop: 4336, Start Num: 16
Candidate Starts for SCentae_12:
(Start: 16 @4106 has 42 MA's), (Start: 17 @4151 has 7 MA's), (19, 4184), (20, 4190),

Gene: Sampson_86 Start: 57651, Stop: 57932, Start Num: 16
Candidate Starts for Sampson_86:
(Start: 16 @57651 has 42 MA's), (Start: 17 @57696 has 7 MA's), (18, 57702), (20, 57735), (21, 57741), (23, 57765), (28, 57828), (29, 57837),

Gene: Sanjuju_62 Start: 50536, Stop: 50775, Start Num: 17
Candidate Starts for Sanjuju_62:
(Start: 16 @50491 has 42 MA's), (Start: 17 @50536 has 7 MA's), (23, 50605), (31, 50695),

Gene: Saronaya_64 Start: 49613, Stop: 49897, Start Num: 16
Candidate Starts for Saronaya_64:
(1, 49250), (3, 49331), (5, 49400), (10, 49454), (14, 49595), (Start: 16 @49613 has 42 MA's), (Start: 17 @49658 has 7 MA's), (21, 49703), (27, 49781), (31, 49820),

Gene: SchottB_61 Start: 49523, Stop: 49807, Start Num: 16
Candidate Starts for SchottB_61:
(1, 49160), (3, 49241), (5, 49310), (14, 49505), (Start: 16 @49523 has 42 MA's), (Start: 17 @49568 has 7 MA's), (21, 49613), (27, 49691), (31, 49730),

Gene: Scioto_84 Start: 57552, Stop: 57782, Start Num: 18
Candidate Starts for Scioto_84:
(Start: 16 @57501 has 42 MA's), (Start: 17 @57546 has 7 MA's), (18, 57552), (20, 57585), (21, 57591), (23, 57615), (28, 57678), (29, 57687),

Gene: Sedona_63 Start: 51205, Stop: 51489, Start Num: 16
Candidate Starts for Sedona_63:
(Start: 16 @51205 has 42 MA's), (Start: 17 @51250 has 7 MA's), (23, 51319),

Gene: Shivanishola_61 Start: 48244, Stop: 48528, Start Num: 16
Candidate Starts for Shivanishola_61:
(1, 47887), (3, 47968), (5, 48037), (Start: 16 @48244 has 42 MA's), (Start: 17 @48289 has 7 MA's), (23, 48358),

Gene: Sitar_64 Start: 51115, Stop: 51399, Start Num: 16
Candidate Starts for Sitar_64:
(3, 50830), (5, 50905), (Start: 16 @51115 has 42 MA's), (Start: 17 @51160 has 7 MA's), (23, 51229),

Gene: Stultus_60 Start: 49377, Stop: 49661, Start Num: 16
Candidate Starts for Stultus_60:
(3, 49092), (5, 49167), (Start: 16 @49377 has 42 MA's), (Start: 17 @49422 has 7 MA's), (23, 49491),

Gene: Tangent_65 Start: 49806, Stop: 50027, Start Num: 17
Candidate Starts for Tangent_65:
(Start: 16 @49761 has 42 MA's), (Start: 17 @49806 has 7 MA's), (23, 49875), (25, 49908),

Gene: Tardus_86 Start: 57993, Stop: 58274, Start Num: 16
Candidate Starts for Tardus_86:
(4, 57741), (7, 57810), (8, 57816), (9, 57819), (15, 57978), (Start: 16 @57993 has 42 MA's), (Start: 17 @58038 has 7 MA's), (18, 58044), (20, 58077), (21, 58083), (23, 58107), (28, 58170), (29, 58179), (34, 58233),

Gene: Thing3_62 Start: 49351, Stop: 49635, Start Num: 16
Candidate Starts for Thing3_62:
(6, 49168), (11, 49249), (13, 49318), (Start: 16 @49351 has 42 MA's), (Start: 17 @49396 has 7 MA's),

Gene: Verity_83 Start: 58773, Stop: 59054, Start Num: 16
Candidate Starts for Verity_83:
(Start: 16 @58773 has 42 MA's), (Start: 17 @58818 has 7 MA's), (18, 58824), (20, 58857), (21, 58863), (23, 58887), (29, 58959),

Gene: Vivi2_68 Start: 50816, Stop: 51082, Start Num: 16
Candidate Starts for Vivi2_68:
(Start: 16 @50816 has 42 MA's), (Start: 17 @50861 has 7 MA's), (23, 50930), (25, 50963),

Gene: Zipp_84 Start: 58654, Stop: 58935, Start Num: 16
Candidate Starts for Zipp_84:
(Start: 16 @58654 has 42 MA's), (Start: 17 @58699 has 7 MA's), (18, 58705), (20, 58738), (21, 58744), (23, 58768), (29, 58840),

Gene: Zitch_86 Start: 56966, Stop: 57247, Start Num: 16
Candidate Starts for Zitch_86:

(Start: 16 @56966 has 42 MA's), (Start: 17 @57011 has 7 MA's), (18, 57017), (20, 57050), (21, 57056), (23, 57080),